

What is claimed is:

1. A localized wireless communication system for communication between a plurality of circuit boards, each of the circuit boards having at least one electronic component located on the board, said system comprising a transceiver on each of the circuit boards, said transceiver enabling radio frequency communication between the circuit boards.
2. The system of claim 1 further comprising an asynchronous transfer mode switch locatable on each of the circuit boards, said switch enabling communication via said transceiver between circuit boards in the asynchronous transfer mode protocol.
3. The system of claim 2 wherein each of said asynchronous transfer mode switches use the asynchronous transfer mode private network to network interface protocol between circuit boards.
4. The system of claim 1 further comprising a modulator for modulating electrical signals from the circuit board into signals for radio frequency transmission by said transceiver.
5. The system of claim 4 wherein said modulator comprises a spread spectrum modulator.
6. The system of claim 1 further comprising a demodulator for demodulating radio frequency signals received by said transceiver into electrical signals for the circuit board.
7. The system of claim 1 further comprising at least one component transceiver, each of said component transceiver locatable on an electronic component on a circuit board, said component transceiver enabling radio frequency communication between circuit board components or across circuit boards.
8. The system of claim 7 further comprising an asynchronous transfer mode switch locatable on each of the circuit boards, said switch enabling communication via said switch transceiver between circuit boards in the asynchronous transfer mode protocol, said switch also enabling communication with electronic components, via said switch transceiver and said component transceiver, in the asynchronous transfer mode protocol.
9. The system of claim 8 wherein said asynchronous transfer mode switch communicates with the electronic components on the circuit board using the asynchronous transfer mode user to network interface protocol.

10. The system of claim 7 further comprising at least one component modulator associated with each of said component transceiver, for modulating electrical signals from the circuit board into signals for radio frequency transmission by said component transceiver.

11. The system of claim 10 wherein said component modulator comprises a spread spectrum modulator.

12. The system of claim 7 further comprising at least one component demodulator associated with each of said component transceiver, for demodulating radio frequency signals received by said component transceiver into electrical signals for the circuit board.

13. A localized wireless communication system for communication between a plurality of circuit components on a circuit board, said system comprising a transceiver locatable on each of the circuit board components for transmitting and receiving radio frequency communication between the circuit board components.

14. A localized wireless communication system for communicating information between a plurality of circuit boards, each of the circuit boards having at least one electronic component located on the board, said system comprising:

an asynchronous transfer mode protocol switch on at least one of the circuit boards for directing communication flow amongst circuit boards in an asynchronous transfer mode protocol;

a radio frequency modulator operable in conjunction with said switch for encoding electrical signals from said switch into signals for radio frequency transmission;

8 a transceiver operable in conjunction with said modulator for said switch for transmitting radio frequency signals from said switch and for receiving radio frequency signals to said switch; and

10 a radio frequency demodulator operable in conjunction with said switch for decoding radio frequency signals received by said transceiver into electrical signals for said switch.

15. The system of claim 14 further comprising at least one transceiver for transmitting radio frequency signals from electronic components on the circuit boards and for receiving radio frequency signals to said components, said component transceiver further comprising a modulator for encoding electrical signals from said components into signals for radio frequency transmission and a demodulator for decoding radio frequency signals received by said transceiver into electrical signals for the electronic components.

16. A method of communicating between a plurality of circuit boards, each of the circuit boards having at least one electronic component located on the board, the method comprising transmitting and receiving radio frequency signals to and from transceivers located on each of the circuit boards.

17. The method of claim 16 further comprising the steps of providing an asynchronous transfer mode switch on each of the circuit boards; and communicating between circuit boards in an asynchronous transfer mode protocol.

18. The method of claim 17 wherein communicating between circuit boards in an asynchronous transfer mode protocol comprises communicating in the asynchronous transfer mode private network to network interface protocol between circuit boards.

19. The method of claim 16 further comprising the step of modulating electrical signals from the circuit boards into signals for radio frequency transmission by the transceivers.

20. The method of claim 16 further comprising the step of demodulating radio frequency signals received by the transceivers into electrical signals for the circuit boards.

21. The method of claim 16 further comprising the step of transmitting and receiving radio frequency signals to and from transceivers located on electronic components on the circuit boards.

22. The method of claim 21 wherein the step of transmitting and receiving radio frequency signals to and from transceivers located on electronic components on the circuit boards comprises transmitting and receiving radio frequency signals between electronic components located on a circuit board and transmitting and receiving radio frequency signals between electronic components located on different circuit boards.

23. The method of claim 22 further comprising the steps of providing an asynchronous transfer mode switch on each of the circuit boards; communicating between circuit boards in an asynchronous transfer mode protocol through the switch; and

communicating between electronic components on circuits boards in an asynchronous transfer mode protocol through the switch.

24. The method of claim 22 wherein communicating between electronic components on circuits boards in an asynchronous transfer mode protocol through the switch comprises communicating in the asynchronous transfer mode user to network interface protocol through the switch.

25. A method of localized wireless communication for communicating information between a plurality of circuit board components, the method comprising:

2 providing a transceiver for each circuit board component;

4 modulating electrical signals from each circuit board component into an RF signal for transmission by a transceiver;

6 transmitting and receiving RF signals between circuit board components with the transceivers; and

8 demodulating received RF signals from the transceivers into electrical signals for the circuit board components.

26. A method of localized wireless communication for communicating information between a plurality of circuit boards, each of the circuit boards having at least one electronic component located on the board, the method comprising:

4 locating an asynchronous transfer mode protocol switch on at least one of the circuit boards and directing communication flow amongst circuit boards in an asynchronous transfer mode protocol;

6 encoding electrical signals from the asynchronous transfer mode switch into signals for radio frequency transmission with a radio frequency modulator;

8 transmitting radio frequency signals from the asynchronous transfer mode switch and receiving radio frequency signals to the switch with a transceiver; and

10 decoding radio frequency signals received by the transceiver into electrical signals for the asynchronous transfer mode switch.

27. The method of claim 24 further comprising the steps of

transmitting and receiving radio frequency signals from electronic components on the circuit boards with transceivers operating in conjunction with the electronic components;

encoding electrical signals from the components into signals for radio frequency transmission by the transceivers; and

decoding radio frequency signals received by the transceivers into electrical signals for the electronic components.

28. A radio frequency switch comprising:

at least one radio frequency transmitter for transmitting addressed input signals received at input ports; and

at least one addressed radio frequency receiver for receiving the transmitted input signals according to output port address.